



EUROPEAN
COMMISSION

CONSTRUCTION-RELATED ACTIVITIES (extract from pdf version of draft Environmental Delegated Act)

Brussels, XXX
[...] (2023) XXX draft

ANNEX 2

ANNEX

to the

COMMISSION DELEGATED REGULATION (EU) .../...

supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to the sustainable use and protection of water and marine resources, to the transition to a circular economy, to pollution prevention and control or to the protection and restoration of biodiversity and ecosystems and for determining whether that economic activity causes no significant harm to any of the other environmental objectives and amending Delegated Regulation (EU) 2021/2139 and Delegated Regulation (EU) 2021/2178

Technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to the transition to a circular economy and for determining whether that economic activity causes no significant harm to any of the other environmental objectives

3. CONSTRUCTION AND REAL ESTATE ACTIVITIES

3.1. Construction of new buildings

Description of the activity

The development of construction projects for residential and non-residential buildings by combining financial, technical, and physical means with a view to sell the building upon delivery or at a later date, as well as the construction of complete residential or non-residential buildings, on own account for sale or on a fee or contract basis.

The economic activities in this category could be associated with several NACE codes, in particular F41.1, F41.2 and F43, in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

³ Implementing Decision (EU) 2018/1147.

Substantial contribution to the transition to a circular economy

1. All generated construction and demolition waste is treated in accordance with Union waste legislation and with the full checklist of the EU Construction and Demolition Waste Management Protocol, in particular by setting sorting systems⁷⁴. At least 90 % (by weight) of the non-hazardous construction and demolition waste generated on the construction site is prepared for re-use⁷⁵ or recycling⁷⁶. This excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC. The operator of the activity demonstrates compliance with the 90% threshold by reporting on the Level(s) indicator 2.2⁷⁷ using the Level 2 reporting format for different waste streams.
 2. The life-cycle Global Warming Potential (GWP) of the building resulting from the construction has been calculated for each stage in the life cycle and is disclosed to investors and clients on demand⁷⁸.
 3. Construction designs and techniques support circularity via the incorporation of concepts for design for adaptability and deconstruction as outlined in Level(s) indicators 2.3 and 2.4
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⁷⁴ EU Construction & Demolition Waste Management Protocol, Annex F, September 2016: <https://ec.europa.eu/docsroom/documents/20509/>.

⁷⁵ 'Preparing for re-use' means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing. This includes, for instance, the preparation for re-use of certain parts of buildings like roof elements, windows, doors, bricks, stones or concrete elements. A pre-requisite for the preparation for re-use of building elements is usually the selective deconstruction of buildings or other structures.

⁷⁶ 'Recycling' means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

⁷⁷ See Level(s) indicator 2.2: Construction and demolition waste and materials, User Manual: overview, guidance and instructions (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.2_v1.1_40pp.pdf. For reporting, the Excel spreadsheet available on the Commission website is to be used: Construction and Demolition Waste (CDW) and materials excel template: for estimating (Level 2) and recording (Level 3) amounts and types of CDW and their final destinations (version 1.1), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>.

⁷⁸ The GWP is communicated as a numeric indicator for each life cycle stage expressed as kgCO₂e/m² (of useful internal floor area) averaged for one year of a reference study period of 50 years. The data selection, scenario definition and calculations are carried out in accordance with EN 15978 (BS EN 15978:2011). The scope of building elements and technical equipment is as defined in the Level(s) common EU framework for indicator 1.2. Following the Level(s) indicator 1.2 reporting format, the indicator is communicated as GWP fossil, GWP biogenic, GWP land use and land use change, as well as the sum of these (GWP overall). Where a national calculation tool exists or is required for making disclosures or for obtaining building permits, the respective tool may be used to provide the required disclosure. Other calculation tools may be used if they fulfil the minimum criteria laid down by the Level(s) common EU framework, see Level(s) indicator 1.2: Lifecycle Global Warming Potential (GWP), User manual: introductory briefing, instructions and guidance (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_1.2_v1.1_37pp.pdf.

respectively. Compliance with this requirement is demonstrated by reporting on the Level(s) indicators 2.3⁷⁹ and 2.4⁸⁰ at Level 2.

4. The use of primary raw material in the construction of the building is minimised through the use of secondary raw materials⁸¹. The operator of the activity ensures that the three heaviest material categories used to construct the building, measured by mass in kilogrammes, comply with the following maximum total amounts of primary raw material used:

- (a) for the combined total of concrete, natural or agglomerated stone a maximum of 70% of the material come from primary raw material;
- (b) for the combined total of brick, tile, ceramic, a maximum of 70% of the material come from primary raw material;
- (c) for biobased products, a maximum of 80% of the total material come from primary raw material;
- (d) for the combined total of glass, mineral insulation, a maximum of 70% of the total material come from primary raw material;
- (e) for non-biobased plastic, a maximum of 50% of the total material come from primary raw material;
- (f) for metals, a maximum of 30% of the total material come from primary raw material;
- (g) for gypsum, a maximum of 65% of the material come from primary raw material.

The thresholds are calculated by subtracting the secondary material from the total amount of each material category used in the works measured by mass in kilogrammes. Where the information on the recycled content of a construction product is not available, it is to be counted as comprising 100% primary raw material. Where a construction product is re-used, it is to be counted as comprising zero primary raw material. Compliance with this criterion is demonstrated by reporting in accordance with the Level(s) common EU framework for indicator 2.1⁸².

5. The operator of the activity uses electronic tools to describe the characteristics of the building as built, including the materials and components used, for the purpose of future

⁷⁹ See Level(s) indicator 2.3: Design for adaptability and renovation, User manual: introductory briefing, instruction and guidance (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.3_v1.1_23pp.pdf.

⁸⁰ See Level(s) indicator 2.4: Design for deconstruction user manual: introductory briefing, instructions and guidance (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.4_v1.1_18pp.pdf.

⁸¹ Including recycled or re-used products.

⁸² See Level(s) indicator 2.1: Bill of Quantities, materials and lifespans, User manual: introductory briefing, instructions and guidance (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.1_v1.1_34pp.pdf. For reporting, the Excel spreadsheet available on the Commission website is to be used: Bill of Quantities, materials and lifespans excel template: for estimating (Level 2) and recording (Level 3) purchases of material quantities and costs (version 1.2), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>.

maintenance, recovery, and reuse, for example using EN ISO 22057:2022 to provide Environmental Product Declarations⁸³. The information is stored in a digital format and is made available to the client. In addition, the operator ensures the long-term preservation of this information beyond the useful life of the building by using the information managing systems provided by national tools, such as cadastre or public register.

Do no significant harm ('DNSH')

(1) Climate change mitigation	The building is not dedicated to extraction, storage, transport or manufacture of fossil fuels. The Primary Energy Demand (PED)⁸⁴ setting out the energy performance of the building resulting from the construction does not exceed the threshold set for the nearly zero-energy building (NZEB) requirements in national regulation implementing Directive 2010/31/EU of the European Parliament and of the Council⁸⁵. The energy performance is certified using an as built Energy Performance Certificate (EPC).
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	Where installed, except for installations in residential building units, the specified water use for the following water appliances are attested by product datasheets, a building certification or an existing product label in the Union, in accordance with the technical specifications laid down in Appendix E to Annex I to Delegated Regulation (EU) 2021/2139: (a) wash hand basin taps and kitchen taps have a maximum water flow of 6 litres/min; (b) showers have a maximum water flow of 8 litres/min; (c) WCs, including suites, bowls and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum

⁸³ ISO standard 22057:2022, Sustainability in buildings and civil engineering works — Data templates for the use of environmental product declarations (EPDs) for construction products in building information modelling (BIM) (version of April 2022), <https://www.iso.org/standard/72463.html>

⁸⁴ The calculated amount of energy needed to meet the energy demand associated with the typical uses of a building expressed by a numeric indicator of total primary energy use in kWh/m² per year and based on the relevant national calculation methodology and as displayed on the Energy Performance Certificate (EPC).

⁸⁵ Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (OJ L 153, 18.6.2010, p. 13).

	average flush volume of 3,5 litres; (d) urinals use a maximum of 2 litres/bowl/hour. Flushing urinals have a maximum full flush volume of 1 litre. To avoid impact from the construction site, the activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	Building components and materials used in the construction comply with the criteria set out in Appendix C to this Annex. Building components and materials used in the construction that may come into contact with occupiers⁸⁶ emit less than 0,06 mg of formaldehyde per m³ of test chamber air upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m³ of test chamber air, upon testing in accordance with CEN/EN 16516⁸⁷ or ISO 16000-3:2011⁸⁸ or other equivalent standardised test conditions and determination methods.⁸⁹ Where the new construction is located on a potentially contaminated site (brownfield site), the site has been subject to an investigation for potential contaminants, for example using standard ISO 18400⁹⁰. Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex. The new construction is not built on one of the following: (a) arable land and crop land with a moderate to high level of soil fertility and below ground biodiversity as referred to the EU LUCAS survey⁹¹;

⁸⁶ Applying to paints and varnishes, ceiling tiles, floor coverings, including associated adhesives and sealants, internal insulation and interior surface treatments, such as those to treat damp and mold.

⁸⁷ CEN/TS 16516: 2013, Construction products - Assessment of release of dangerous substances - Determination of emissions into indoor air.

⁸⁸ ISO 16000-3:2011, Indoor air — Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air — Active sampling method.

⁸⁹ The emissions thresholds for carcinogenic volatile organic compounds relate to a 28-day test period.

⁹⁰ ISO 18400 series on Soil quality — Sampling.

⁹¹ JRC ESDCA, LUCAS: Land Use and Coverage Area frame Survey (version of [adoption date]: <https://esdac.jrc.ec.europa.eu/projects/lucas>).

	(b) greenfield land of recognised high biodiversity value and land that serves as habitat of endangered species (flora and fauna) listed on the European Red List⁹² or the IUCN Red List⁹³; (c) land matching the definition of forest as set out in national law used in the national greenhouse gas inventory, or where not available, is in accordance with the FAO definition of forest⁹⁴.
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3.2. Renovation of existing buildings

Description of the activity

Construction and civil engineering works or preparation thereof.

The economic activities in this category could be associated with several NACE codes, in particular F41 and F43 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

Technical screening criteria

Substantial contribution to the transition to a circular economy

1. All generated construction and demolition waste is treated in accordance with Union waste legislation and the full checklist of the EU Construction and Demolition Waste Management Protocol, in particular by setting sorting systems and pre-demolition audits⁹⁵. At least 70% (by weight) of the non-hazardous construction and demolition waste generated on the construction site is prepared for re-use⁹⁶ or recycling⁹⁷. This excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Commission Decision

⁹² IUCN, The IUCN European Red List of Threatened Species (version of [adoption date]: <https://www.iucn.org/regions/europe/our-work/biodiversity-conservation/european-red-list-threatened-species>).

⁹³ IUCN, The IUCN Red List of Threatened Species (version of [adoption date]: <https://www.iucnredlist.org>).

⁹⁴ Land spanning more than 0,5 hectares with trees higher than five meters and a canopy cover of more than 10 %, or trees able to reach those thresholds in situ. It does not include land that is predominantly under agricultural or urban land use, FAO Global Resources Assessment 2020. Terms and definitions. (version of [adoption date]: <http://www.fao.org/3/I8661EN/i8661en.pdf>).

⁹⁵ EU Construction & Demolition Waste Management Protocol, Annex F, September 2016: <https://ec.europa.eu/docsroom/documents/20509/>.

⁹⁶ 'Preparing for re-use' means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing. This includes, for instance, the preparation for re-use of certain parts of buildings like roof elements, windows, doors, bricks, stones or concrete elements. A pre-requisite for the preparation for re-use of building elements is usually the selective deconstruction of buildings or other structures.

⁹⁷ 'Recycling' means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

2000/532/EC. The operator of the activity demonstrates compliance with the 70% threshold by reporting on the Level(s) indicator 2.2⁹⁸ using the Level 2 reporting format for different waste streams.

2. The life cycle Global Warming Potential (GWP)⁹⁹ of the building's renovation works has been calculated for each stage in the life cycle, from the point of renovation, and is disclosed to investors and clients on demand.

3. Construction designs and techniques support circularity via the incorporation of concepts for design for adaptability and deconstruction as outlined in Level(s) indicators 2.3 and 2.4 respectively. The operator of the activity demonstrates compliance with this requirement by reporting on the Level(s) indicators 2.3¹⁰⁰ and 2.4¹⁰¹ at Level 2.

4. At least 50% of the original building is retained. This is to be calculated based on the gross floor area retained from the original building using the applicable national or regional measurement methodology, alternatively using the definition of 'floor area' contained in the International Property Measurement Standards¹⁰².

5. The use of primary raw material in the renovation of the building is minimised through the use of secondary raw materials¹⁰³. The operator of the activity ensures that the three heaviest material categories that have been newly added to the building in the renovation of the building, measured by mass in kilogrammes comply with the following thresholds regarding the maximum amount of primary raw material used:

- (a) for concrete, natural or agglomerated stone a maximum of 85% of the material come from primary raw material;

⁹⁸ See Level(s) indicator 2.2: Construction and demolition waste and materials, User Manual: overview, guidance and instructions (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.2_v1.1_40pp.pdf. For reporting, the Excel spreadsheet available on the Commission website is to be used: Construction and Demolition Waste (CDW) and materials excel template: for estimating (Level 2) and recording (Level 3) amounts and types of CDW and their final destinations (version 1.1), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>.

⁹⁹ The GWP is communicated as a numeric indicator for each life cycle stage expressed as kgCO₂e/m² (of useful internal floor area) averaged for one year of a reference study period of 50 years. The data selection, scenario definition and calculations are carried out in accordance with EN 15978 (BS EN 15978:2011. Sustainability of construction works. Assessment of environmental performance of buildings. Calculation method). The scope of building elements and technical equipment is as defined in the Level(s) common EU framework for indicator 1.2. Where a national calculation tool exists, or is required for making disclosures or for obtaining building permits, the respective tool may be used to provide the required disclosure. Other calculation tools may be used if they fulfil the minimum criteria laid down by the Level(s) common EU framework, see Level(s) indicator 1.2: Lifecycle Global Warming Potential (GWP), User manual: introductory briefing, instructions and guidance (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_1.2_v1.1_37pp.pdf.

¹⁰⁰ See Level(s) indicator 2.3: Design for adaptability and renovation, User manual: introductory briefing, instruction and guidance (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.3_v1.1_23pp.pdf.

¹⁰¹ See Level(s) indicator 2.4: Design for deconstruction user manual: introductory briefing, instructions and guidance (Publication version 1.1), https://susproc.jrc.ec.europa.eu/productbureau/sites/default/files/2021-01/UM3_Indicator_2.4_v1.1_18pp.pdf.

¹⁰² International Property Measurement Standards: All Buildings. Published by the International Property Measurement Standards Coalition (IPMSC), <https://ipmsc.org/>.

¹⁰³ Including recycled or re-used products.

- (b) for brick, tile, ceramic, a maximum of 85% of the material come from primary raw material;
- (c) for biobased products, a maximum of 90% of the material come from primary raw material;
- (d) for glass, mineral insulation, a maximum of 85% of the material come from primary raw material;
- (e) for non-biobased plastic, a maximum of 75% of the material come from primary raw material;
- (f) for metals, a maximum of 65% of the material come from primary raw material;
- (g) for gypsum, a maximum of 83% of the material come from primary raw material.

The thresholds are calculated by subtracting the secondary material from the total amount of each material used in the works measured by mass in kilogrammes. Where the information on the recycled content of the construction product is not available, it is to be counted as comprising 100% primary raw material. Where a construction product is re-used, it is to be counted as comprising zero primary raw material. Compliance with this criterion is demonstrated by reporting in accordance with the Level(s) common EU framework for indicator 2.1¹⁰⁴.

6. The operator of the activity uses electronic tools to describe the characteristics of the building as built, including the materials and components used, for the purpose of future maintenance, recovery, and reuse, for example using EN ISO22057:2022 to provide Environmental Product Declarations¹⁰⁵. The information is stored in a digital format and is made available to the client. In addition, the operator of the activity ensures the long-term preservation of this information beyond the useful life of the building by using the information managing systems provided by national tools, such as cadastre or public register.

Do no significant harm ('DNSH')

(1) Climate change mitigation	The building is not dedicated to extraction, storage, transport or manufacture of fossil fuels.
(2) Climate change	The activity complies with the criteria set out in Appendix A to this

¹⁰⁴ See Level(s) indicator 2.1: Bill of Quantities, materials and lifespans, User manual: introductory briefing, instructions and guidance (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.1_v1.1_34pp.pdf. For reporting, the Excel spreadsheet available on the Commission website is to be used: Bill of Quantities, materials and lifespans excel template: for estimating (Level 2) and recording (Level 3) purchases of material quantities and costs (version 1.2), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>.

¹⁰⁵ ISO standard 22057:2022, Sustainability in buildings and civil engineering works — Data templates for the use of environmental product declarations (EPDs) for construction products in building information modelling (BIM) (version of April 2022), <https://www.iso.org/standard/72463.html>.

adaptation	Annex.
(3) Sustainable use and protection of water and marine resources	Where installed as part of the renovation works, except for renovation works in residential building units, the specified water use for the following water appliances are attested by product datasheets, a building certification or an existing product label in the Union, in accordance with the technical specifications laid down in Appendix E to Annex I to Delegated Regulation (EU) 2021/2139: (a) wash hand basin taps and kitchen taps have a maximum water flow of 6 litres/min; (b) showers have a maximum water flow of 8 litres/min; (c) WCs, including suites, bowls and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum average flush volume of 3,5 litres; (d) urinals use a maximum of 2 litres/bowl/hour. Flushing urinals have a maximum full flush volume of 1 litre.
(5) Pollution prevention and control	Building components and materials used in the construction comply with the criteria set out in Appendix C to this Annex. Building components and materials used in the construction that may come into contact with occupiers¹⁰⁶ emit less than 0,06 mg of formaldehyde per m³ of test chamber air upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m³ of test chamber air, upon testing in accordance with EN 16516 or ISO 16000-3:2011¹⁰⁷ or other equivalent standardised test conditions and determination methods. Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.
(6) Protection and restoration of biodiversity and ecosystems	N/A

¹⁰⁶ Applying to paints and varnishes, ceiling tiles, floor coverings (including associated adhesives and sealants), internal insulation and interior surface treatments, such as to treat damp and mould.

¹⁰⁷ ISO 16000-3:2011, Indoor air — Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air — Active sampling method (version of [adoption date]: <https://www.iso.org/standard/51812.html>).

3.3. Demolition and wrecking of buildings and other structures

Description of the activity

The demolition and wrecking of buildings, roads and runways, railways, bridges, tunnels, waste water treatment works, water treatment works, pipelines, wells and boreholes, power-generating plants, chemical plants, dams and reservoirs, mines and quarries, offshore structures, near shore works, ports, waterway works or land formation and reclamation¹⁰⁸.

For projects associated with the activities Construction of New Buildings or Renovation of existing buildings (see Sections 3.1. and 3.2. of this Annex), where the demolition works and the construction or renovation works are procured under the same contract, the technical screening criteria for the construction or renovation activities apply.

The economic activity does not include the demolition and wrecking of buildings and other structures carried out as part of the activity Remediation of contaminated sites and areas (see Section 2.4. of Annex III).

The economic activities in this category could be associated with NACE code F43 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

Technical screening criteria

Substantial contribution to the transition to a circular economy

1. Prior to the start of the demolition or wrecking activity, at least the following aspects from the Level 1 design concept checklist of the Level(s) indicator 2.2¹⁰⁹ checklist are discussed and agreed upon with the client:

- (a) definition of key performance indicators and target ambition level;
- (b) identification of project-specific constraints that may compromise the target ambition level (such as time, labour and space) and how to minimise these constraints;
- (c) details of the pre-demolition auditing procedure;
- (d) an outline waste management plan that prioritises selective deconstruction, decontamination and source separation of waste streams. Where these actions are not prioritised, an explanation is provided to justify why selective deconstruction, decontamination or source separation of waste streams are not technologically

¹⁰⁸ See activities listed by the International Cost Management Standard in the ICMS: Global Consistency in Presenting Construction Life Cycle Costs and Carbon Emissions 3rd edition, Table 1: ICMS Projects with their corresponding codes, https://icmscblog.files.wordpress.com/2021/11/icms_3rd_edition_final.pdf

¹⁰⁹ See Level(s) indicator 2.2 : Construction and Demolition waste and materials, User manual: introductory briefing, instructions and guidance (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.2_v1.1_40pp.pdf

feasible in the project. Cost or financial considerations are not an acceptable reason to avoid complying with this requirement.

2. The operator of the activity conducts a pre-demolition audit in line with the EU Construction and Demolition Waste Management Protocol¹¹⁰.
3. All demolition waste generated during the demolition or wrecking activity is treated in accordance with Union waste legislation and the full checklist of the EU Construction and Demolition Waste Protocol¹¹¹.
4. At least 90 % (by weight) of the non-hazardous demolition waste generated on the demolition site is prepared for re-use¹¹² or recycling¹¹³. This excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Commission Decision 2000/532/EC. The operator of the activity demonstrates compliance with the 90% threshold by reporting on the Level(s) indicator 2.2¹¹⁴ using the Level 3 reporting format for different waste streams. Alternatively, at least 95% for mineral¹¹⁵ fraction and 70% for the non-mineral fraction for non-hazardous demolition waste is

¹¹⁰ Guidelines for the waste audits before demolition and renovation works of buildings. EU Construction and Demolition Waste Management, May 2018: <https://ec.europa.eu/docsroom/documents/31521/attachments/1/translations/en/renditions/native>. For reporting the estimates of Level 2 Demolition Waste, the Excel spreadsheet available on the Commission website is to be used: Construction and Demolition Waste (CDW) and materials excel template: for estimating (Level 2) and recording (Level 3) amounts and types of CDW and their final destinations (version 1.1), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>.

¹¹¹ Guidelines for the waste audits before demolition and renovation works of buildings. EU Construction and Demolition Waste Management, May 2018: <https://ec.europa.eu/docsroom/documents/31521/attachments/1/translations/en/renditions/native>. For reporting the estimates of Level 3 Construction and Demolition Waste, the Excel spreadsheet available on the Commission website is to be used: Construction and Demolition Waste (CDW) and materials excel template: for estimating (Level 2) and recording (Level 3) amounts and types of CDW and their final destinations (version 1.1), <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents>. For this, each type of demolition waste is tagged with the appropriate six-digit code from the European List of Waste established by Commission Decision 2000/532/EC. When including the type of waste treatment in the Excel spreadsheet (i.e. preparation for reuse, for recycling, material recovery, energy recovery or disposal), evidence is included that the economic operators receiving the waste has the technical capability to carry out this treatment. Such evidence may consist in a link to the company's webpages where this is documented or a signed statement from a representative of the company. Where the treatment takes place on the demolition site, such as onsite reuse or recycling, acceptable evidence may consist in a signed statement from a representative of the company.

¹¹² 'Preparing for re-use' means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing. This includes, for instance, the preparation for re-use of certain parts of buildings like roof elements, windows, doors, bricks, stones or concrete elements. A pre-requisite for the preparation for re-use of building elements is usually the selective deconstruction of buildings or other structures.

¹¹³ 'Recycling' means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

¹¹⁴ See Level(s) indicator 2.2: Construction and demolition waste and materials, User Manual: overview, guidance and instructions (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.2_v1.1_40pp.pdf

¹¹⁵ See Annex III to Commission Regulation 849/2010 for a categorisation of mineral non-hazardous construction and demolition waste, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010R0849&from=EN>

separately collected and prepared for reuse or recycled.

Do no significant harm ('DNSH')

(1) Climate change mitigation	The building owner or contractor ensures that during renovation, refurbishing or demolition activities implying the removal of foam panels⁴⁰, or laminated boards⁴¹ installed in cavities or built up structures, that contain foams with Fluorinated greenhouse gases, saturated and unsaturated Hydrofluorocarbons, and Ozone Depleting Substances, as defined in Regulation (EU) No 517/2014 and in Regulation (EU) No 1005/2009, the emissions are avoided to the extent possible by handling the foams or the gases contained therein in a way that ensures the reuse or destruction of the foam panels or the gases contained in the foams. The recovery of the gases contained in the foams is carried out by appropriately trained personnel. Where recovery of these foams is not technically feasible, the operator shall draw up documentation providing evidence for the infeasibility of the recovery in the specific case. Such documentation is retained for five years and is made available, on request.
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex. The activity does not hamper the achievement of good environmental status of marine waters or does not deteriorate marine waters that are already in good environmental status as defined in Article 2, points (21) of Regulation (EU) 2020/852 and in accordance with Directive 2008/56/EC, which requires in particular that the appropriate measures are taken to prevent or mitigate impacts in relation to the descriptors laid down in Annex I to that Directive, taking into account the Commission Decision (EU) 2017/8489 in relation to the relevant criteria and methodological standards for those descriptors.
(5) Pollution prevention and control	Measures are taken to reduce noise, dust and pollutant emissions during demolition and wrecking works.
(6) Protection and restoration of	The activity complies with the criteria set out in Appendix D to this

biodiversity and ecosystems	Annex.
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3.4. Maintenance of roads and motorways

Description of the activity

Maintenance of streets, roads and motorways, other vehicular and pedestrian ways, surface work on streets, roads, highways, bridges or tunnels, aerodrome runways, taxiways and aprons, defined as all actions undertaken to maintain and restore the serviceability¹¹⁶ and level of service of roads¹¹⁷. For bridges and tunnels, the economic activity only includes the maintenance of the road that runs on the bridge or through the tunnel. It does not include the maintenance of the bridge or tunnel itself.

The economic activity includes routine maintenance, which can be scheduled on a periodical basis. The economic activity also includes preventive maintenance and rehabilitation which are defined as works undertaken to preserve or restore serviceability and to extend the service life¹¹⁸ of an existing road. The maintenance operation is mainly dedicated to pavement management and concerns only the following main elements of the road: binder course, surface course and concrete slabs. The roads in the scope of this economic activity are made of asphalt, concrete or asphalt concrete.

The economic activities in this category could be associated with NACE code F42.11 in accordance with the statistical classification of economic activities established by Regulation (EC) No 1893/2006.

Technical screening criteria

Substantial contribution to the transition to a circular economy

1. Where main road elements (binder course, surface course or concrete slabs) are demolished or removed, 100% (by mass in kilogrammes) of the non-hazardous waste generated onsite is prepared for re-use¹¹⁹ or recycling¹²⁰. This excludes naturally occurring material referred to in

¹¹⁶ 'Serviceability' refers to the conditions under which a built asset is still considered safe to use.

¹¹⁷ 'Level of service' refers to a qualitative or quantitative measure to assess the infrastructure's ability to cater to the traffic demands placed on it.

¹¹⁸ 'Service life' refers to the period of use in service, i.e. from the date of construction until the date of reconstruction or demolition.

¹¹⁹ 'Preparing for re-use' means checking, cleaning or repairing recovery operations, by which products or components of products that are prepared so that they can be re-used without any other pre-processing. This includes, for instance, the preparation for re-use of certain parts of buildings like roof elements, windows, doors, bricks, stones or concrete elements. A pre-requisite for the preparation for re-use of building elements is usually the selective deconstruction of buildings or other structures.

¹²⁰ 'Recycling' means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of

category 17 05 04 in the European List of Waste established by Commission Decision 2000/532/EC.

2. Where road elements are newly installed after demolition or removal, at least 50% (by mass in kilogrammes) of the structural road elements used are re-used or recycled materials.

3. The re-used or recycled materials are not moved over distances greater than 2.5 times the distance between the construction site and the nearest production facility for equivalent primary raw materials, to avoid that the use of re-used or recycled materials leads to higher CO₂ emissions than the use of primary raw materials.

4. Where newly installed, the binder course has a service lifetime no shorter than 20 years¹²¹.

5. The use of primary raw material for road furniture is minimised through the use of re-used or recycled products. The operator of the activity ensures that for metals, such as steel barriers, a maximum of 30% of the material come from primary raw material.

Do no significant harm ('DNSH')

(1) Climate change mitigation	A traffic congestion mitigation plan to be implemented during the maintenance works is presented.
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	Measures are taken to reduce noise, dust and pollutant emissions during construction and maintenance works. When choosing road surface types, low noise road surfaces are preferred, in accordance with the comprehensive criterion B7 'minimum requirements for low-noise pavement design' of the EU Green Public Procurement Criteria for Road Design, Construction and Maintenance ¹²² .

organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

¹²¹ Commission Staff Working Document. EU Green Public Procurement Criteria for Road Design, Construction and Maintenance, 2016, p. 17:
<https://ec.europa.eu/environment/gpp/pdf/toolkit/roads/EN.pdf> .

¹²² Commission Staff Working Document. EU Green Public Procurement Criteria for Road Design, Construction and Maintenance (SWD(2016) 203), 2016, p.15, column 'comprehensive criteria', GPP criteria Roads (2016) 203.pdf (europa.eu), (version of [adoption date]).

(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex.
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3.5. Use of concrete in civil engineering

Description of the activity

Use of concrete for new construction, reconstruction, or maintenance¹²³ of civil engineering objects, except concrete road surfaces on streets, motorways, highways, other vehicular and pedestrian ways, bridges, tunnels and aerodrome runways, taxiways and aprons that are covered under the economic activity ‘Maintenance of roads and motorways’ (See Section 4.1. of this Annex).

An economic activity in this category could be associated with several NACE codes, in particular F42.12, F42.13, F42.2, F42.9, in accordance with the statistical classification for economic activities established by Regulation (EC) No 1893/2006.

Technical screening criteria

Substantial contribution to the transition to a circular economy

1. All generated construction and demolition waste is treated in accordance with Union waste legislation and the full checklist of the EU Construction and Demolition Waste Management Protocol, in particular by setting sorting systems¹²⁴. At least 90 % (by weight) of the non-hazardous construction waste deriving from concrete products is prepared for re-use¹²⁵ or recycling¹²⁶. This excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Commission Decision 2000/532/EC. The operator of the activity demonstrates compliance with the 90% threshold by reporting on the Level(s) indicator 2.2 using the Level 2 reporting format for different waste streams.

2. Construction designs and techniques support circularity via the incorporation of concepts for adaptability and deconstruction as outlined in Level(s) indicators 2.3 and 2.4 respectively.

¹²³ ‘Maintenance of civil engineering objects’ is defined as all actions undertaken to maintain and restore the serviceability and level of service of roads.

¹²⁴ EU Construction & Demolition Waste Management Protocol, Annex F, September 2016: <https://ec.europa.eu/docsroom/documents/20509/>.

¹²⁵ ‘Preparing for re-use’ means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing. This includes, for instance, the preparation for re-use of certain parts of buildings like roof elements, windows, doors, bricks, stones or concrete elements. A pre-requisite for the preparation for re-use of building elements is usually the selective deconstruction of buildings or other structures.

¹²⁶ ‘Recycling’ means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

Compliance with this requirement is demonstrated by reporting on the Level(s) indicators 2.3¹²⁷ and 2.4¹²⁸ at Level 2.

3. The use of primary raw material is minimised through the use of recycled products. For concrete, a maximum of 70% of the material comprises primary raw material. This criterion applies to in-situ poured concrete, pre-cast products, and all constituent materials, including any reinforcement.

4. The re-used or recycled materials is not moved over distances greater than 2.5 times the distance between the construction site and the nearest production facility for equivalent primary raw materials, to avoid that the use of re-used or recycled materials leads to higher CO₂ emissions than the use of primary raw materials.

5. The operator of the activity uses electronic tools to describe the characteristics of the building as built, including the materials and components used, for the purpose of future maintenance, recovery, and reuse, for example using EN ISO 22057:2022¹²⁹ to provide Environmental Product Declarations¹³⁰. The information is stored in a digital format and is made available to the client. In addition, the operator ensures the long-term preservation of this information beyond the useful life of the building by using the information managing systems provided by national tools, such as cadastre or public register.

6. Bridges, tunnels, dikes, and sluices are equipped with monitoring functions to predict maintenance needs.

Do no significant harm ('DNSH')

(1) Climate change mitigation	The built asset is not dedicated to the extraction, storage, transport or manufacture of fossil fuels. The concrete used in this activity includes cement, for which the greenhouse gas emissions¹³¹ from the production processes are: (a) for grey cement clinker, lower than 0,816¹³² tCO₂e per tonne of grey cement clinker;
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¹²⁷ See Level(s) indicator 2.3: Design for adaptability and renovation, User manual: introductory briefing, instruction and guidance (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.3_v1.1_23pp.pdf.

¹²⁸ See Level(s) indicator 2.4: Design for deconstruction user manual: introductory briefing, instructions and guidance (Publication version 1.1), https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2021-01/UM3_Indicator_2.4_v1.1_18pp.pdf.

¹²⁹ ISO 22057:2022, Sustainability in buildings and civil engineering works — Data templates for the use of environmental product declarations (EPDs) for construction products in building information modelling (BIM) <https://www.iso.org/standard/72463.html>.

¹³⁰ ISO standard 22057:2022, Sustainability in buildings and civil engineering works — Data templates for the use of environmental product declarations (EPDs) for construction products in building information modelling (BIM) (version of April 2022), <https://www.iso.org/standard/72463.html>.

¹³¹ Calculated in accordance with Regulation (EU) 2019/331.

¹³² Reflecting the median value of the installations in 2016 and 2017 (t CO₂ equivalents/t) of the data collected in the context of establishing the Commission Implementing Regulation (EU) 2021/447,

	(b) for cement from grey clinker or alternative hydraulic binder, lower than 0,530 ¹³³ tCO ₂ e per tonne of cement or alternative binder manufactured.
(2) Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex.
(3) Sustainable use and protection of water and marine resources	The activity complies with the criteria set out in Appendix B to this Annex.
(5) Pollution prevention and control	Building components and materials used in the construction comply with the criteria set out in Appendix C to this Annex. Building components and materials used in the construction that may come into contact with occupiers¹³⁴ emit less than 0,06 mg of formaldehyde per m³ of test chamber air upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m³ of test chamber air, upon testing in accordance with CEN/EN 16516¹³⁵ or ISO 16000-3:2011¹³⁶ or other equivalent standardised test conditions and determination methods.¹³⁷ Where the new construction is located on a potentially contaminated site (brownfield site), the site has been subject to an investigation for potential contaminants, for example by using standard ISO 18400. Measures are taken to reduce noise, dust and pollutant emissions during construction works. Where appropriate, given the sensitivity of the area affected, in particular in terms of the size of population and fauna affected, noise

determined on the basis of verified information on the greenhouse gas efficiency of installations reported pursuant to Article 11 of Directive 2003/87/EC.

¹³³ Reflecting the median value of the installations in 2016 and 2017 (t CO₂ equivalents/t) of the data collected for grey cement clinker in the context of establishing the Commission Implementing Regulation (EU) 2021/447, multiplied by the clinker to cement ratio (0.65), determined on the basis of verified information on the greenhouse gas efficiency of installations reported pursuant to Article 11 of Directive 2003/87/EC.

¹³⁴ Applying to paints and varnishes, ceiling tiles, floor coverings, including associated adhesives and sealants, internal insulation and interior surface treatments, such as those to treat damp and mold.

¹³⁵ CEN/TS 16516: 2013, Construction products - Assessment of release of dangerous substances - Determination of emissions into indoor air.

¹³⁶ ISO 16000-3:2011, Indoor air — Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air — Active sampling method.

¹³⁷ The emissions thresholds for carcinogenic volatile organic compounds relate to a 28-day test period.

	and vibrations from construction, use and maintenance of infrastructure are mitigated by acoustical planning introducing open trenches, wall barriers or other appropriate measures in compliance with Directive 2002/49/EC of the European Parliament and of the Council ¹³⁸ .
(6) Protection and restoration of biodiversity and ecosystems	The activity complies with the criteria set out in Appendix D to this Annex. Where protective areas of fauna and flora are affected, an Environmental Integration and a Restoration Plan¹³⁹ is developed and implemented in order to restore ecosystems across land and sea after completion of the proper civil engineering measure. For this, measures are taken, such as sustainable forest management and avoidance of deforestation, wildlife passages across the construction or nature-based solutions that protect, sustainably manage, and restore natural or modified ecosystems, and that address societal challenges effectively.

